

Test laboratory for the fire behavior of building materials, Dipl.-Ing. (FH) Andreas Hoch
Testing, supervising and certifying body, authorized by the building supervision authority

TEST REPORT

PZ-Hoch-170388

for the proof of Fire behaviour according to DIN 4102, part 1

Translation of the German test report – no guarantee for translation of technical terms

company	DICKSON COATINGS 415, avenue de Savoie F-38110 Saint Clair de la Tour
description of samples	polyester fabric with PVC-coating in 3 different colours
name of the material	„ARCADE FR“
sampling	by the company itself
content of request	Proof of flammability to classify building materials to class B1 “schwerentflammbar” according to DIN 4102, part 1
validity of test report	28.02.2022
result	The examined product meets in any colour the requirements of class B1 for “schwerentflammbare” (hardly flammable) building materials according to DIN 4102, part 1 (May 1998) , suspended freely or with distance of >40 mm to same or other plain materials.

This test report includes 5 pages and 7 enclosures.

Remark: If the above mentioned building material is not used as product according to MBO § 2, Abs. 9, Ziffer1, there is no need for a general building supervisory test report.

This test report is not valid if the examined building material is used as product in the meaning of state building prescriptions (MBO § 17, Abs. 3).

This test report does not replace an eventually necessary proof of applicability concerning building supervisory or building laws in the meaning of state building prescriptions. This has to be verified by:

- “allgemeine bauaufsichtliche Zulassung” (general building inspectorate approval) or by
- „allgemeines bauaufsichtliches Prüfzeugnis“ (general building inspectorate certificate) or by
- “Zustimmung im Einzelfall” (exceptional approval)

This test report can underlie building supervisory procedures

- for regular building products for the prescribed proofs of conformity
- for non regular building products for the needed proofs of applicability.

This test report must not be published and copied without preceding agreement of the test laboratory and if agreed, only during validity and unchanged concerning appearance and contents.

1. Description of test material in condition as delivered

PN 25172: "ARCADE FR" colour: blue

-polyester fabric with PVC-coating-
side A: smooth / side B: structured

characteristic values determined by the test laboratory:

area weight: about 526 g/m² thickness: about 0,42 mm

PN 25173: "ARCADE FR" colour: white

-polyester fabric with PVC-coating-
side A: smooth / side B: structured

characteristic values determined by the test laboratory:

area weight: about 518 g/m² thickness: about 0,41 mm

PN 25174: "ARCADE FR" colour: green

-polyester fabric with PVC-coating-
side A: smooth / side B: structured

characteristic values determined by the test laboratory:

area weight: about 528 g/m² thickness: about 0,43 mm

The testing laboratory is not provided with further details concerning composition of the tested building materials. Samples are deposited.

2. Preparation of samples

The samples were kept in climate chamber 23/50 until they reached constant weight.

3. Arrangement of samples

mounting:	freely suspended		
#8894:	flaming side A in warp direction	PN 25174	green
#8895:	flaming side B in warp direction	PN 25174	green
#8896:	flaming side A in weft direction	PN 25174	green
#8897:	flaming side A in warp direction	PN 25173	white
#8898:	flaming side A in warp direction	PN 25172	blue

4. Date of test CW 13 in 2017

5. Results The test has been examined according to DIN 4102 (Mai 1998)

line no.	Measurement	Result with the tested specimen					Dim.
	Test number	#8894	#8895	#8896	#8897	#8898	
	flaming direction / side	warp / A	warp / B	weft / A	warp / A	warp / A	
	sample-no.	PN 25174			PN 25173	PN 25172	
1	Number of specimen arrangement acc. to. DIN 4102/T15, schedule 1	1	1	1	1	1	
2	Maximum flame height above bottom edge of the specimen	60	50	60	60	60	cm
3	Time ¹⁾	0:09	0:07	0:09	0:09	0:08	min:s
4	Burn through / melting Time ¹⁾	0:08	0:07	0:10	0:09	0:10	min:s
	Observations on the back side of the specimen						
5	Flames / Glowing Time ¹⁾	./.	./.	./.	./.	./.	min:s
6	Change of color Time ¹⁾	./.	./.	./.	./.	./.	min:s
7	Falling of burning droplets Start ¹⁾	./.	./.	./.	X 0:41	./.	min:s
8	Extent						
9	sporatic falling of burning droplets ²⁾	./.	./.	./.	X	./.	min:s
10	continuous falling of burning droplets ²⁾	./.	./.	./.	./.	./.	min:s
11	Falling of burning droplets Start ¹⁾	./.	./.	./.	./.	./.	min:s
12	Extent	./.	./.	./.	./.	./.	min:s
13	sporatic falling of burning droplets ²⁾	./.	./.	./.	./.	./.	min:s
14	continuous falling of burning droplets ²⁾	./.	./.	./.	./.	./.	min:s
15	Afterflame time at the bottom of the sieve (max.)	./.	./.	./.	0:08	./.	min:s
16	Impairment of the burner by dropping or falling material: Time ¹⁾	./.	./.	./.	./.	./.	min:s
17	Premature end of test						
18	Final occurrence of burning at the specimen ¹⁾	./.	./.	./.	./.	./.	min:s
19	Time of eventually end of test ¹⁾	./.	./.	./.	./.	./.	min:s
20	Afterflame after end of test Time ¹⁾	./.	./.	./.	./.	./.	min:s
21	Number of specimen	./.	./.	./.	./.	./.	min:s
22	Front side of specimen ²⁾	./.	./.	./.	./.	./.	min:s
23	Back side of specimen ²⁾	./.	./.	./.	./.	./.	min:s
24	flame length	./.	./.	./.	./.	./.	cm

line	g	Measurement	Result with the tested specimen					Dim.
			#8894	#8895	#8896	#8897	#8898	
		Test number						
		flaming direction / side	warp / A	warp / B	weft / A	warp / A	warp / A	
22		Afterglow after end of test	./.	./.	./.	./.	./.	min:s
		Time ¹⁾	./.	./.	./.	./.	./.	
23		Number of specimen	./.	./.	./.	./.	./.	
		Place of appearance	./.	./.	./.	./.	./.	
24		Lower half of the specimen ²⁾	./.	./.	./.	./.	./.	
25		Upper half of the specimen ²⁾	./.	./.	./.	./.	./.	
26		Front side of specimen ²⁾	./.	./.	./.	./.	./.	
27		Back side of specimen ²⁾	./.	./.	./.	./.	./.	
28		Density of smoke						
		≤ 400 % * min	26	15	28	29	19	% * min
29		> 400 % * min ⁴⁾	./.	./.	./.	./.	./.	% * min
30		Diagram: encl. no.	1	2	3	4	5	
31		Residual lengths: individual value ³⁾						
		Specimen 1	56	66	61	62	58	cm
		Specimen 2	58	61	55	63	62	cm
		Specimen 3	56	61	57	61	58	cm
		Specimen 4	55	65	59	59	58	cm
32		Average value, individual test ³⁾	56	63	58	61	59	
33		Photo of specimen in enclosure no.	1	2	3	4	5	
34		Flue gas temperature	116	118	118	118	120	°C
35		Maximum of average value						
		Time ¹⁾	09:54	09:57	09:54	09:18	08:59	min:s
36		Diagram: encl. no.	1	2	3	4	5	
37		Remarks: - none -						

¹⁾ indication of times: from the begin of testing procedure

²⁾ checked off if applicable

³⁾ indication of carrier/foam layer separated in case of fire-proofing agents

⁴⁾ very strong development of smoke

6. Explanations concerning the testing procedure

There were no additional tests proceeded because of the residual length of more than 45 cm.

7. Summary of results and additional establishments to Fire Behaviour

line no.	measurement	Result with the tested specimen					dim ensi on
	test-no.	#8894	#8895	#8896	#8897	#8898	
	flaming direction / side	warp / A	warp / B	weft / A	warp / A	warp / A	
	sample-no.	PN 25174			PN 25173	PN 25172	
1	residual length	56	63	58	61	59	cm
2	max. smoke temperature	116	118	118	118	120	°C
3	density of smoke - integral	26	15	28	29	19	%min
4	remarks: none						

According to DIN 4102, part 1, "schwerentflammbare" (hardly flammable) building materials must meet the requirements of class B2.

Pursuant to additional tests in the ignitability apparatus this can be determined (appendix 6 & 7).

8. Special remarks

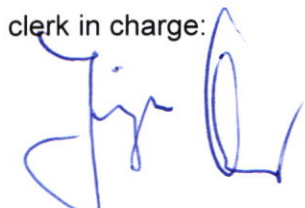
- This report is only valid for the material as described under paragraph 1. In combination with other materials or with additional coatings or grounds etc. the burning behaviour may differ.
- This test report is not valid for the exposure to outdoor climate conditions.
- This test report is not valid, as soon as the fabric is used as a building product in the sense of the "Landesbauordnungen" (state building requirements, MBO § 17, par. 3).
- This test report is no substitute for a General Building Inspectorate Certificate.
- This test report is granted without prejudice to the rights of third parties, im particular private proprietary rights.
- For legal interests only the German original version is relevant.
- In General Building Inspectorates procedures this test report can be based for
 - regular building materials for the required proof of accordance
 - for not regular building materials for the required proof of applicability

9. Validity

This test report is valid until the mentioned date on page 1. The test report becomes invalid in case the standards on which the tests are based are changed.

Fladungen, 30.03.2017

clerk in charge:



(Dipl.-Ing. (FH) Jürgen Hammer)

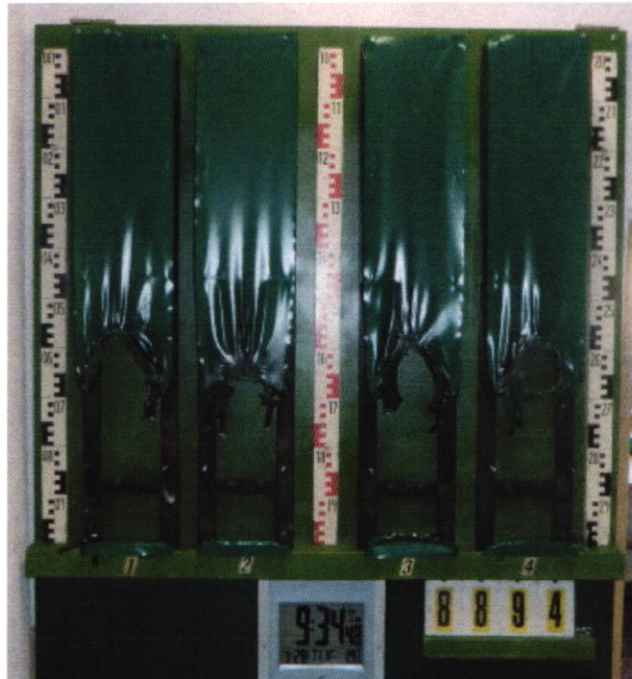


Head of the test laboratory:



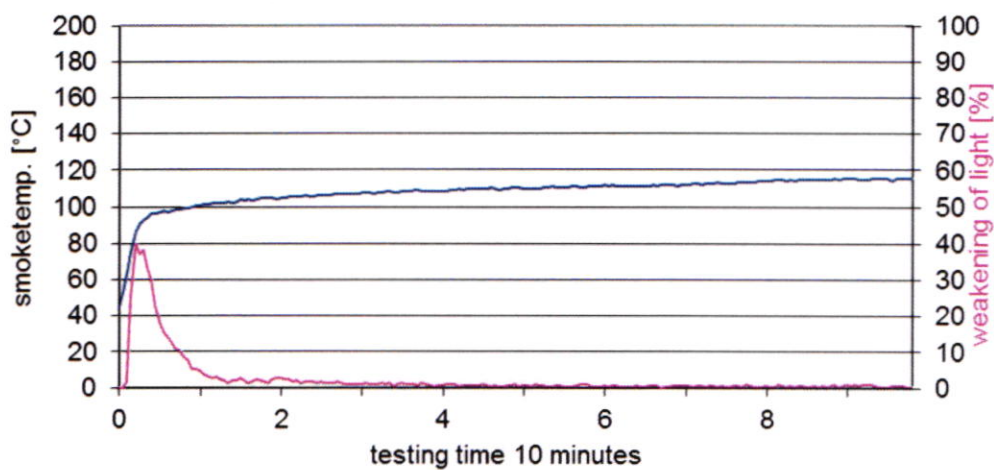
(Dipl.-Ing.(FH) Andreas Hoch)

„Brandschacht“-test #8894

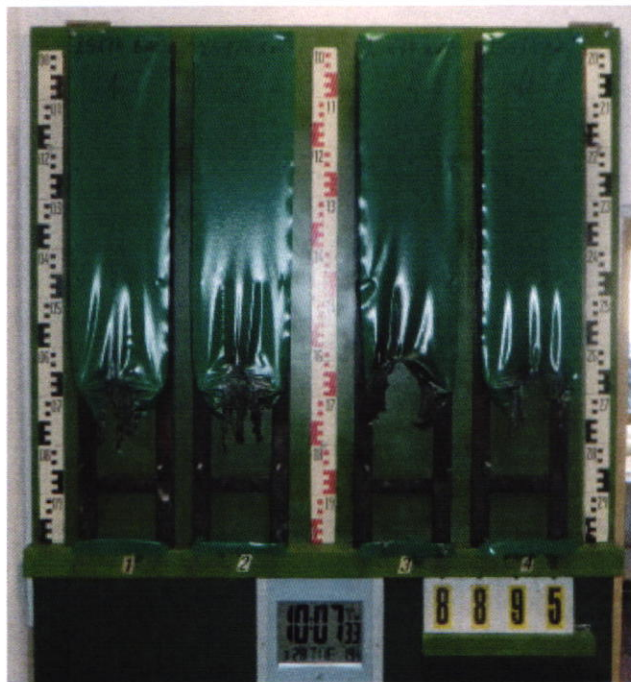


measurement

#8894, DICKSON, "ARCADE FR", A+K, PN 25174
residual length: 56cm, max. smoketemp: 116°C, smoke-Int.: 26%/min

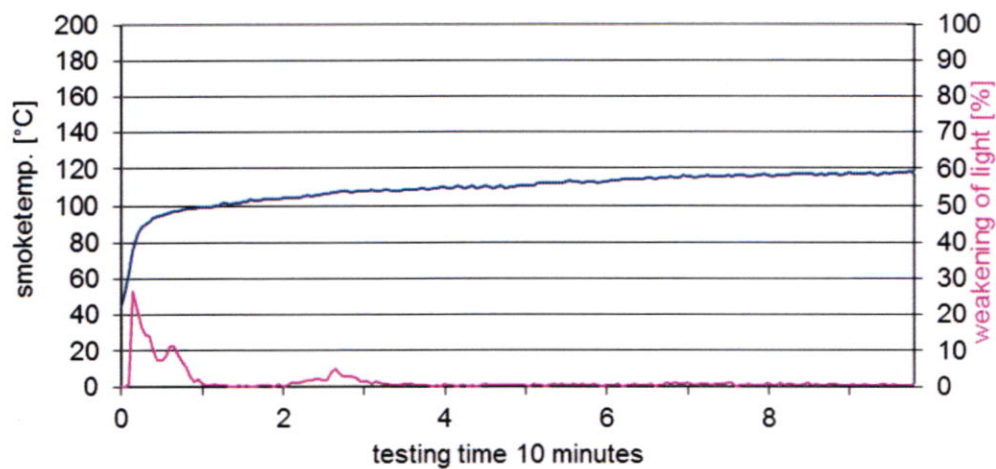


„Brandschacht“-test #8895



measurement

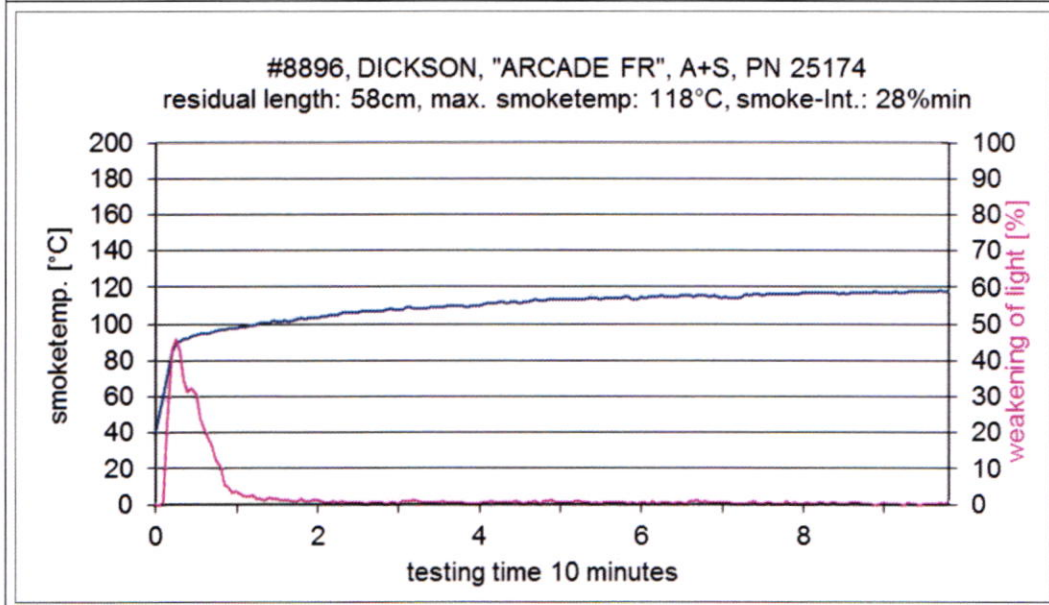
#8895, DICKSON, "ARCADE FR", B+K, PN 25174
residual length: 63cm, max. smoketemp: 118°C, smoke-Int.: 15%/min



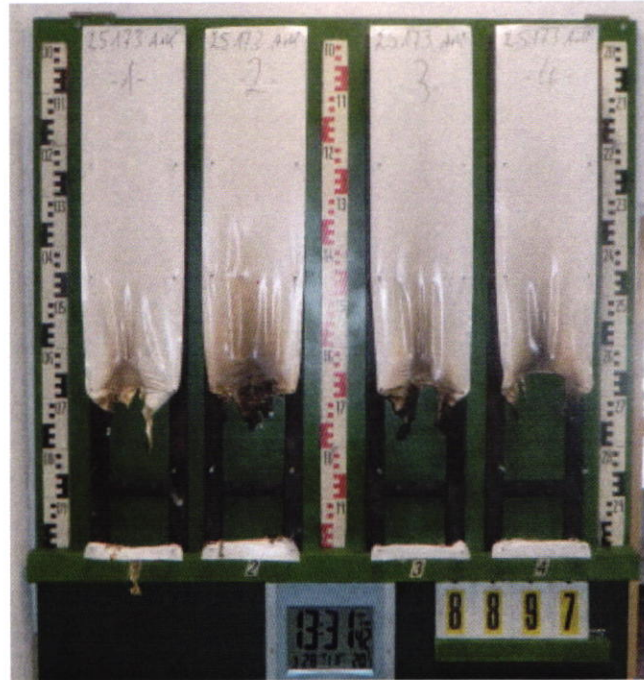
„Brandschacht“-test #8896



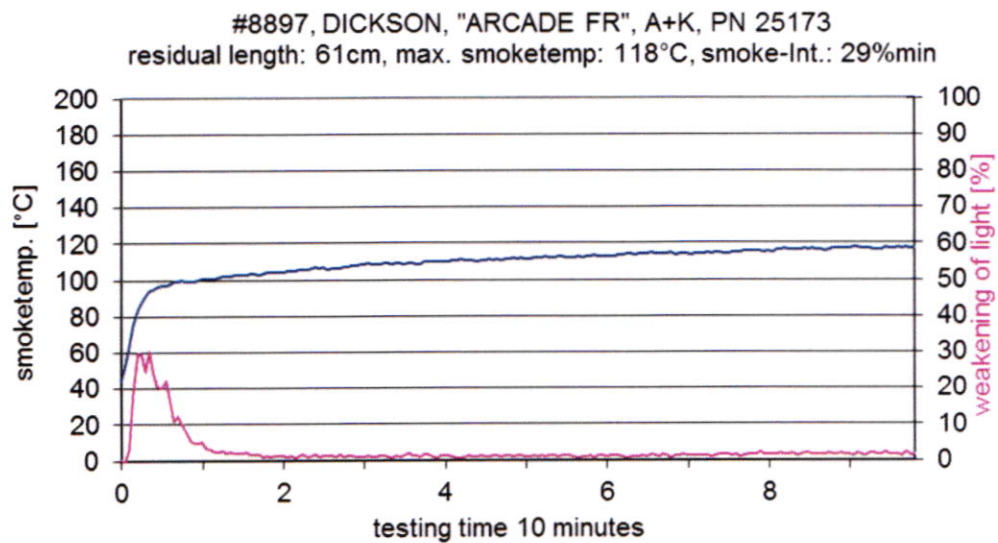
measurement



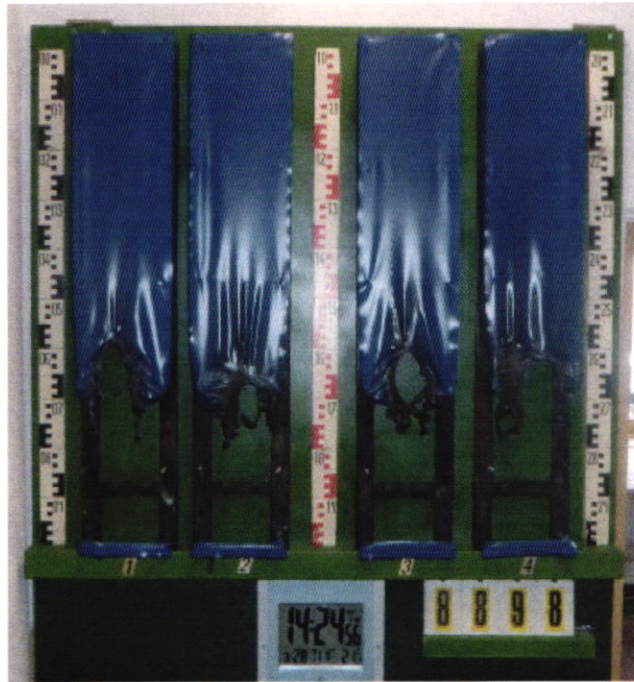
„Brandschacht“-test #8897



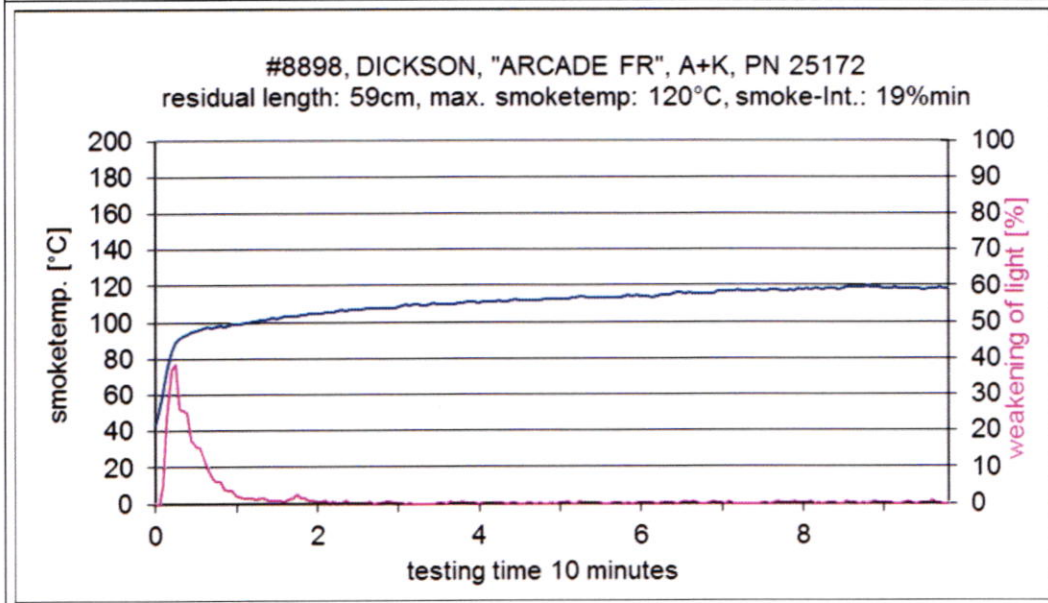
measurement



„Brandschacht“-test #8898



measurement



**Test for normal flammability
classifying B2 according to DIN 4102**

1. Description of test material in condition as delivered look at page 2

2. Preparation of samples

Out of the material there have been cut samples for the ignitability apparatus.
The samples were kept in a climate 23/50 until they reached constant weight.

3. Arrangement of samples -freely suspended-

Flaming in warp and weft direction / Flaming side A and side B

4. Date of test CW 13 in 2017

5. Results

PN 25174: flaming side B in warp direction	surface-test						edge-test						Dim
samples no.	1	2	3	4	5	6	1	2	3	4	5	6	
ignition ¹⁾	2	2	2	2	2	--	1	--	--	--	--	--	s
reaching the mark of measurement ¹⁾²⁾	-/-	-/-	-/-	-/-	-/-	--	-/-	--	--	--	--	--	s
max. flame height	13	10	10	13	13	--	11	--	--	--	--	--	cm
time	12	15	15	12	15	--	10	--	--	--	--	--	
self cessation of the flames end of afterflame ¹⁾	15	15	15	17	16	--	15	--	--	--	--	--	s
end of glowing ¹⁾	-/-	-/-	-/-	-/-	-/-	--	15	--	--	--	--	--	s
smoke development (visual)	very heavy						very heavy						
dropping of burning material during 20 s ¹⁾	-/-	-/-	-/-	-/-	-/-	--	-/-	--	--	--	--	--	s
Appearance after test: burned out till max. height 9 cm x width 3 cm.													

PN 25174: additional tests	edge-test						surface-test						Dim
samples no.	1	2	3	4	5	6	1	2	3	4	5	6	
ignition ¹⁾	1	1	1	--	--	--	2	2	2	--	--	--	s
reaching the mark of measurement ¹⁾²⁾	-/-	-/-	-/-	--	--	--	-/-	-/-	-/-	--	--	--	s
max. flame height	11	9	10	--	--	--	13	13	6	--	--	--	cm
time	10	12	15	--	--	--	10	15	15	--	--	--	
self cessation of the flames end of afterflame ¹⁾	15	15	16	--	--	--	15	15	15	--	--	--	s
end of glowing ¹⁾	17	17	17	--	--	--	-/-	-/-	-/-	--	--	--	s
smoke development (visual)	very heavy						very heavy						
dropping of burning material during 20 s ¹⁾	-/-	-/-	-/-	--	--	--	-/-	-/-	-/-	--	--	--	s
Appearance after test: burned out till max. height 9 cm x width 3 cm													

¹⁾ time mentioned from the beginning of the test ²⁾ during 20 Sec -/- no appearance -- no information

PN 25173: additional tests	edge-test						surface-test						Dim
samples no.	1	2	3	4	5	6	1	2	3	4	5	6	
ignition ¹⁾	1	1	1	1	--	--	2	2	2	2	--	--	s
reaching the mark of measurement ¹⁾²⁾	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
max. flame height	9	11	11	9	--	--	12	13	12	12	--	--	cm
time	10	14	15	10	--	--	10	15	10	15	--	--	
self cessation of the flames end of afterflame ¹⁾	17	14	20	16	--	--	15	16	15	15	--	--	s
end of glowing ¹⁾	18	16	-/-	17	--	--	-/-	-/-	-/-	-/-	--	--	s
smoke development (visual)	very heavy						very heavy						
dropping of burning material during 20 s ¹⁾	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
Appearance after test: burned out till max. height 12 cm x width 4 cm													

PN 25172: additional tests	edge-test						surface-test						Dim
samples no.	1	2	3	4	5	6	1	2	3	4	5	6	
ignition ¹⁾	1	1	1	1	--	--	2	2	2	2	--	--	s
reaching the mark of measurement ¹⁾²⁾	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
max. flame height	12	10	11	11	--	--	6	12	12	12	--	--	cm
time	10	10	15	15	--	--	15	15	15	15	--	--	
self cessation of the flames end of afterflame ¹⁾	20	18	19	20	--	--	15	15	15	18	--	--	s
end of glowing ¹⁾	-/-	18	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
smoke development (visual)	very heavy						very heavy						
dropping of burning material during 20 s ¹⁾	-/-	-/-	-/-	-/-	--	--	-/-	-/-	-/-	-/-	--	--	s
Appearance after test: burned out till max. height 12 cm x width 4 cm													

¹⁾ time mentioned from the beginning of the test ²⁾ during 20 Sec -/- no appearance -- no information

6. Remarks and explanations to the testing procedure - none -

7. Opinion concerning the dropping of burning material

The test for normal flammability shows no dropping burning material.